

REMARKS

By this amendment, claims 1-3 have been cancelled, and claims 4-6 have been added. Thus, claims 4-6 are now active in the application. Reexamination and reconsideration of the application are respectfully requested.

Minor amendments to the specification and Abstract have been made in order to correct various editorial and idiomatic errors. No new matter has been added by such amendments.

Initially, applicant wishes to thank the Examiner for the kind acknowledgment at the top of page 2 of the Office Action that the priority papers have been received and placed of record in the U.S. PTO file.

Next, on pages 2 and 3 of the Office Action, the Abstract of the Disclosure was objected to for the inclusion of the phrase "disclosed is." Accordingly, the Abstract has been amended to eliminate this objectionable phrase, and it is submitted that the Abstract is now clearly in proper form.

Next, on pages 3 and 4 of the Office Action, claims 1-3 were rejected under 35 U.S.C. 102(e) as being anticipated by Honda et al. (U.S. 6,849,805). This rejection is moot in view of the cancellation of claims 1-3. Furthermore, it is submitted that this rejection is clearly inapplicable to the new claims 4-6, for the following reasons.

With exemplary reference to the drawing figures, claim 4 sets forth a circuit board 1 including: a substrate 5; at least one circuit pattern 6 provided on opposite sides of the substrate 5; an anti-soldering layer 7 provided on the at least one circuit pattern 6 on one side (top side in the figures) of the substrate 5 to prevent soldering material from sticking to the at least one circuit pattern 6; at least one silk-screen printing area 3 provided on the anti-soldering layer 7 to indicate where a selected electric or electronic part or device 8 is to be mounted; at least one terminal hole 2a, 2b formed in the substrate 5 at a center of the at least one silk-screen printing area 3; a conductor layer 10a, 10b formed on an inner circumference of the at least one terminal hole 2a, 2b; a substrate-exposed zone 4 provided on the one side (top side) of the substrate 5, the substrate-exposed zone being free of the at least one circuit pattern 6, the anti-soldering layer 7

and the at least one silk-screen printing area 3, such that the one side of the substrate 5 is exposed in the substrate-exposed zone 4; wherein the substrate-exposed zone 4 is a contiguous substrate-exposed zone that extends continuously across a portion of said one side of the substrate 5 and between portions of the at least one silk-screen printing area so as to extend across the center of the at least one silk-screen printing area 3 where the at least one terminal hole 2a, 2b is formed (see Figs. 1 and 3).

Claim 6 similarly sets forth a soldering structure for soldering a selected electric or electronic part or device 8 having at least one terminal lead 9 on a circuit board 1, including: a substrate 5; at least one circuit pattern 6 provided on opposite sides of the substrate 5; an anti-soldering layer 7 provided on the at least one circuit pattern 6 on one side of the substrate 5 to prevent soldering material from sticking to the at least one circuit pattern 6; at least one silk-screen printing area 3 provided on the anti-soldering layer 7 to indicate where the selected electric or electronic part or device 8 is to be mounted; at least one terminal hole 2a, 2b formed in the substrate 5 at a center of the at least one silk-screen printing area 3; a conductor layer 10a, 10b formed on an inner circumference of the at least one terminal hole 2a, 2b; a substrate-exposed zone 4 provided on the one side of the substrate 5, the substrate-exposed zone 4 being free of the at least one circuit pattern 6, the anti-soldering layer 7 and the at least one silk-screen printing area 3, such that the one side of the substrate 5 is exposed in the substrate-exposed zone 4; wherein the substrate-exposed zone 4 is a contiguous substrate-exposed zone 4 that extends continuously across a portion of said one side of the substrate 5 and between portions of the at least one silk-screen printing area 3 so as to extend across the center of the at least one silk-screen printing area 3 where the at least one terminal hole 2a, 2b is formed, such that, when the selected electric or electronic part or device 8 is mounted on the at least one silk-screen printing area 3 on said one side of the substrate 5 with the at least one terminal lead 9a, 9b passing through the at least one terminal hole 2a, 2b, a space is formed between an exposed substrate surface of the substrate 5 in the substrate-exposed zone 4 and a bottom of the selected electric or electronic part or device 8 (see Figs. 2 and 3), and at least one annular space respectively defined

between the at least one terminal lead 9a, 9b and the conductor layer 10a, 10b is filled with soldering material (see Figs. 2 and 3).

Thus, each of the independent claims 4 and 6 specifically requires the presence of a substrate-exposed zone 4 that is free of the at least one circuit pattern 6, the anti-soldering layer 7 and the at least one silk-screen printing area 3, such that the one side of the substrate 5 is exposed in the substrate-exposed zone 4. Claims 4 and 6 further specify that the substrate-exposed zone is a contiguous zone that extends continuously across a portion of the one side of the substrate 5 and between portions of the at least one silk-screen printing area 3 so as to extend across the center of the at least one silk-screen printing area 3 where the at least one terminal hole 2a, 2b is formed, as clearly illustrated in Figs. 1-3.

In contrast to the present invention as defined in claims 4 and 6, the Honda et al. patent clearly does not disclose or suggest such a substrate-exposed zone. Although there are perhaps portions of the upper surface of the substrate of the Honda et al. patent that are exposed (i.e. free of the layers 4, 6 and 8) as illustrated in Figs. 1 and 4, these do not constitute a contiguous substrate-exposed zone that extends continuously across a portion of the one side of the substrate and between portions of the at least one silk-screen printing area so as to extend across the center of the at least one silk-screen printing area where the at least one terminal hole is formed, as specifically required by claims 4 and 6.


Because of this clear distinction between the present invention as recited in claims 4 and 6 and the Honda et al. patent, it is believed apparent that claims 4 and 6 are not anticipated by the Honda et al. patent. Furthermore, there is clearly no teaching or suggestion in the Honda et al. patent that would have motivated a person of ordinary skill in the art to modify the Honda et al. arrangement in such a manner as to result in or otherwise render obvious the present invention of claims 4 and 6. Therefore, it is respectfully submitted that claims 4 and 6, as well as claim 5 which depend from claim 4, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Satoshi TORII

By: 
Charles R. Watts
Registration No. 33,142
Attorney for Applicant

CRW/asd
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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